

The invention claimed is:

1. A utility vehicle control system for a utility vehicle having a forward-facing

driving position and a rearward-facing seat, comprising:

a speed-controllable transmission operable to output power to drive a

5 wheel;

a creep speed control actuator located adjacent to the rearward-facing
seat;

a creep speed control system operatively connected to said actuator and
to said transmission, said system converting movement of said speed control actuator
10 to speed change of said transmission.

2. The control system according to claim 1, wherein said transmission

comprises a hydrostatic transmission having a variable displacement pump that
includes a swashplate, the angular position of the swashplate controlling variable
15 displacement pump capacity, the pump hydraulically connected to a hydraulic motor,
and a hydraulic control system having a control spool valve, the movement of which
causes pressurized hydraulic fluid to change the angle of said swashplate, and said
control system comprises a mechanical link connecting said creep speed control
actuator to said spool valve.

20

3. The control system according to claim 1, wherein said transmission

comprises a reverser transmission having a clutch pack, and

said control system comprises a controller and a position sensor connected to said

lever to output a position signal to said controller, and a pressure control valve hydraulically connected to said clutch pack to actuate said clutch pack, said controller outputting a signal to said control valve to modulate clutch pressure according to actuator position.

5

4. The control system according to claim 1, wherein said transmission comprises a hydrostatic transmission having a variable displacement pump that includes a swashplate, the angular position of the swashplate controlling variable displacement pump capacity, the pump hydraulically connected to a hydraulic motor, and a hydraulic control system having a servo piston housed in a servo cylinder, and connected to said swashplate, movement of said piston within said cylinder causing a change of angle of said swashplate, and a forward pressure control valve and a reverse pressure control valve, said valves hydraulically connected to opposite sides of the servo piston respectively, said forward and reverse pressure control valves selectively energized to move said servo piston within said servo cylinder, and a controller, and said actuator comprises a position sensor to send an actuator position signal to said controller.

10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95

5. The control system according to claim 1, wherein said actuator is located to be hand-activated by an operator.

20

6. The control system according to claim 1, wherein said activator comprises a speed selector and a separate direction selector.

7. A utility vehicle control system for a utility vehicle having a forward-facing driving position and a rearward-facing seat, comprising:

a hydrostatic transmission operable to output power to drive a wheel;

a creep speed control actuator located adjacent to the rearward-facing

5 seat, said creep speed control actuator outputting a creep speed signal for forward or reverse direction;

a controller having an input for receiving said creep speed signal, and an output sending a signal substantially proportional to said creep speed signal;

10 a first pressure control valve signal-connected to said controller and hydraulically-connected to said hydrostatic transmission, and energized to cause forward movement of said vehicle, a second pressure control valve signal-connected to said controller and hydraulically-connected to said hydrostatic transmission, and energized to cause reverse movement of said vehicle, said controller energizing one
15 of said first and second control valves corresponding to the speed signal of said actuator.

8. A utility vehicle control system for a utility vehicle having a forward-facing driving position and a rearward-facing seat, comprising:

20 a hydrostatic transmission operable to output power to drive a wheel;

a creep speed control actuator located adjacent to the rearward-facing seat, said creep speed control actuator outputting a mechanical creep speed signal for forward or reverse direction;

a linkage having an input for receiving said mechanical creep speed signal, and a mechanical output sending a mechanical signal substantially proportional to said mechanical creep speed signal;

5 a mechanism having a mechanical input receiving said mechanical signal and a mechanical output connected to said swashplate to change the angle of said swashplate according to said creep speed signal.

10 9. The control system according to claim 8, wherein said control comprises a microcontroller.

15 10. The control system according to claim 8, wherein said transmission comprises a hydrostatic transmission having a variable displacement pump controlled by a proportional control valve, said output signal controlling said proportional control valve.

20 11. The control system according to claim 8, wherein said creep speed control actuator includes a potentiometer for providing said input signal, said input signal proportional to accelerator travel.

25 12. A method of controlling the speed of a transmission from a rear implement-facing seat, comprising the steps of:

 while an operator is seated in the rear facing seat, moving a creep speed actuator to output a speed signal proportional to speed demand;

sending said output signal to a transmission of the vehicle to control speed of the transmission.

13. The method according to claim 12, wherein said step of sending said
5 output signal is further defined in that said output signal is an electrical signal to proportional control valves of the transmission.

14. The method according to claim 12, wherein said step of sending said output signal is further defined in that said output signal is a mechanical signal to a
10 servo system of the transmission.